

03–313 Reconditioning and squaring connecting rod

Data

Center of connecting rod bearing bore to center of connecting rod bushing bore		149.05
		148.95
Width of connecting rod at connecting rod bearing bore and on connecting rod bushing bore		31.88
		31.84
Basic bore for connecting rod bearing shells		55.60
		55.62
Basic bore for connecting rod bushing	Standard dimension	29.00
		29.02
	Repair stage	29.50
	Standard dimension	29.52
Connecting rod bushing OD	Standard dimension	29.096
		29.058
	Repair stage	29.596
		29.558
Connecting rod bushing ID		26.012
		26.018
Roughness of connecting rod bushing, inside		0.002
Perm. offset of connecting rod bearing bore in relation to connecting rod bushing bore with reference to a length of 100 mm		0.1
Perm. deviation of parallel alignment of axes: Connecting rod bearing bore in relation to connecting rod bushing bore with reference to a length of 100 mm.		0.03
Perm. difference in weight of complete connecting rods within one engine		5 grams

Tightening torque

Connecting rod nuts	Initial torque	40–50 Nm (4–5 kpm)
	Angle of rotation torque	90–100°

Conventional tool

Connecting rod straightening tool

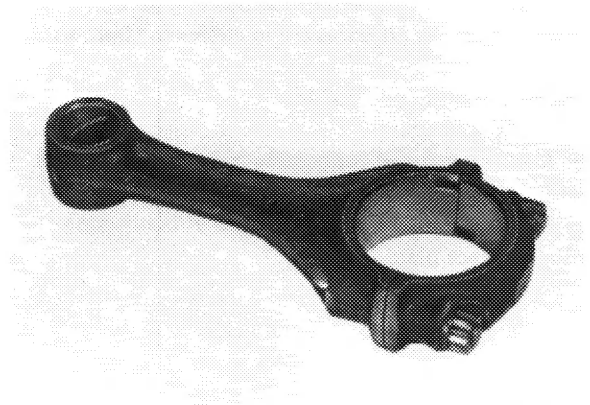
e.g. made by Hahn & Kolb, D-7000 Stuttgart
Model BC 503

Note

Connecting rods which are overheated as a result of bearing damage (blue discoloration) should no longer be used.

Connecting rod and connecting rod cap are marked together. The connecting rod shaft should have no transverse score marks and notches.

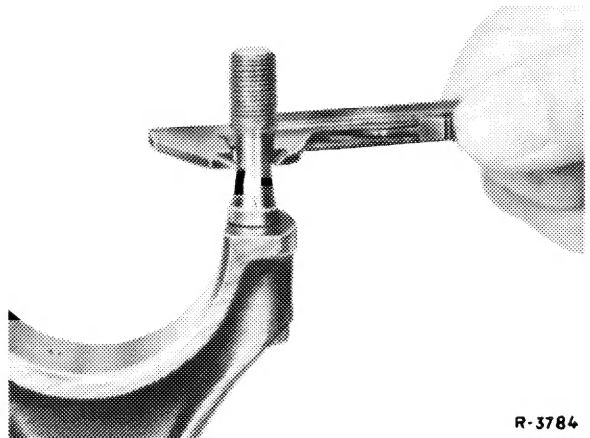
Connecting rods with machined connecting rod bushing are supplied as spare parts.



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Reconditioning

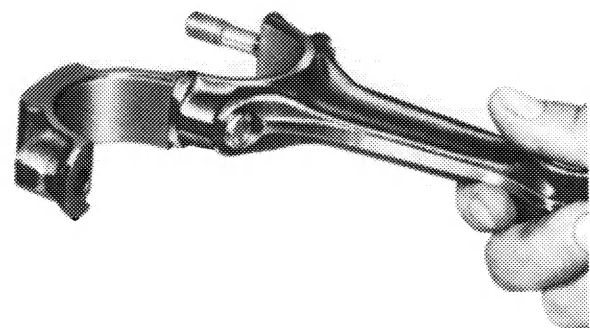
1 Check connecting rod bolts and replace, if required (03-310).



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2 Check bores for connecting rod bolts.

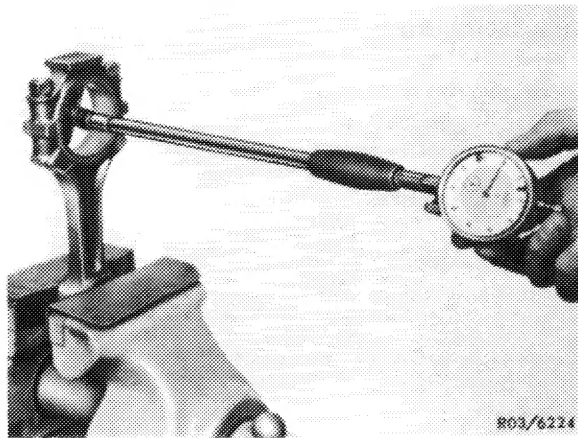
Mount connecting rod bearing cap on a connecting rod bolt. If the connecting rod bearing cap is moving downwards under its own weight, the connecting rod must be replaced.



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3 Mount connecting rod bearing caps and tighten connecting rod nuts to 40–50 Nm initial torque and 90–100° angle of rotation torque.

4 Measure connecting rod bearing basic bore. If basic bore exceeds a specified value of 55.62 mm or if conical in shape, refinish bearing cap supporting surface on a face plate up to max. 0.02 mm.

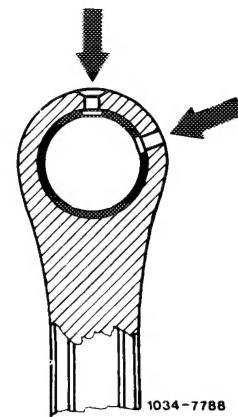


5 Press-in new connecting rod bushing in such a manner that the oil bores are in alignment (arrows).

Pressing-in pressure 2500 N.

6 Machine or ream connecting rod bushing.

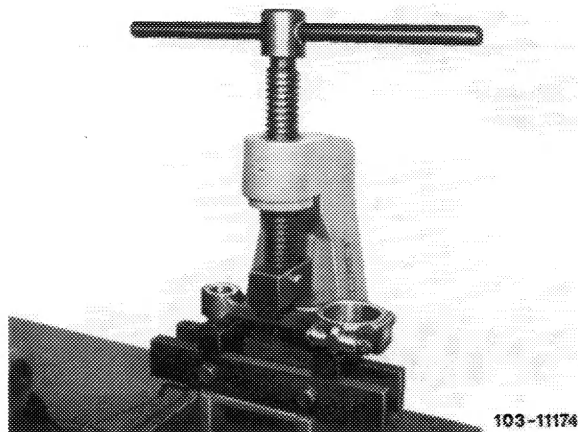
7 Refinish lateral contact surfaces of connecting rod on a face plate.



Squaring

8 Square connecting rod by means of connecting rod tester.

9 Align connecting rod bore in relation to connecting rod bushing bore (parallel alignment).



10 Check offset of connecting rod bearing bore in relation to connecting rod bushing bore and make corrections, if required.

